

WHAT IS CLAIMED IS:

1. A conveyor suitable for conveying objects along a transport direction, the conveyor comprising:

a plurality of connected links, each link having a length extending across the direction of transport and a width extending along the direction of transport, each link having a body, a slider, at least one gripping member, and a gear drive mechanism interconnecting the slider and gripping member, the slider being slidable along the length of the body to selectively move the gripping member between a first position and a second position via the gear drive mechanism, the gripping member when in first position being disposed in an open position, and the gripping member when in the second position being disposed in a gripping position for contacting one of the objects to hold the object during transport.
2. The conveyor of claim 1, wherein the gear drive mechanism is a rack and pinion arrangement with a pinion portion being located on the gripping member and a rack portion being located on the slider.
3. The conveyor of claim 1, wherein each link includes a spring member for urging the gripping member toward one of the first or second positions.
4. The conveyor of claim 1, wherein each link includes a cam follower.
5. The conveyor of claim 4, wherein the cam follower contacts a cam to thereby urge the gripper toward one of the first or second positions.
6. The conveyor of claim 1, wherein each link includes a fence member, the gripping member gripping the object between the fence member and the gripping member when the gripping member is in the second position.

7. The conveyor of claim 6, wherein the link body defines a conveying surface, and the gripping member and fence member are configured to grip the object so that the object is spaced from the conveying surface.

8. The conveyor of claim 6, wherein the gripping member and the fence member are configured to grip and convey an object in an inverted position with the object located substantially below the links.

9. The conveyor of claim 6, wherein the gripping member and the fence member are configured to grip a container neck.

10. The conveyor of claim 1, wherein the gripping member includes an adapter sized to fit the object.

11. The conveyor of claim 1, wherein the second position is self-adjustable depending on the size of the object.

12. The conveyor of claim 1, wherein each gripping member pivots relative to its respective link when moving from the first position to the second position.

13. The conveyor of claim 12, wherein each gripping member pivots about an axis substantially parallel to the direction of transport when moving from the first position to the second position.

14. The conveyor of claim 1, wherein each link includes a spring member, and each gripping member is urged toward the second position by the spring member.

15. The conveyor of claim 1, wherein the conveyor includes a first cam member for urging the gripping members toward the second position.

16. The conveyor of claim 1, wherein the conveyor includes a second cam member for urging the gripping members toward the first position.

17. The conveyor of claim 1, wherein each link includes at least one cam follower for contacting at least one cam member to move the gripping member.
18. The conveyor of claim 17, the cam follower is mounted on the slider.
19. The conveyor of claim 1, wherein the second position is self-adjustable depending on the size of the object.
20. The conveyor of claim 1, wherein the gripping member includes two gripping arms movable relative to the conveying surface.
21. The conveyor of claim 1, wherein the gripping member has at least one gripping arm laterally offset from the gear drive mechanism in the direction of transport.
22. The conveyor of claim 1, wherein the conveyor is configured so that conveyed objects can be removed from the gripping members when the gripping members are in the second gripping position.
23. The conveyor of claim 1, wherein each link includes two of the gripping members independently movable relative to the link.
24. The conveyor of claim 23, wherein each link includes two of the sliders and two of the gear drive mechanisms, each gripping member being operatively associated with a respective one of the sliders and a respective one of the gear drive mechanisms.
25. The conveyor of claim 24, wherein each gear drive mechanism includes a rack portion disposed on a respective one of the sliders and a gear portion disposed on a respective one of the gripping members.
26. A link for a conveyor suitable for conveying objects along a transport direction, the link comprising:

a link body having a length extending across the direction of transport and a width extending along the direction of transport;

a slider slidable along the length of the link body;

at least one gripping member movable relative to the slider and link body; and

a gear drive mechanism interconnecting the slider and gripping member, the slider selectively moving the gripping member between a first position and a second position via the gear drive mechanism, the gripping member when in first position being disposed in an open position, and the gripping member when in the second position being disposed in a gripping position for contacting one of the objects to hold the object during transport.

27. The link of claim 26, wherein the gear drive mechanism is a rack and pinion arrangement with a pinion portion being located on the gripping member and a rack portion being located on the slider.

28. The link of claim 26, further including a spring member for urging the gripping member toward one of the first or second positions.

29. The link of claim 26, wherein each link includes a cam follower.

30. The link of claim 29, wherein the cam follower contacts a cam to thereby urge the gripping member toward one of the first or second positions.

31. The link of claim 26, further including a fence member, the gripping member gripping the object between the fence member and the gripping member when the gripping member is in the second position.

32. The link of claim 31, wherein the link body defines a conveying surface, and the gripping member and fence member are configured to grip the object so that the object is spaced from the conveying surface.

33. The link of claim 31, wherein the gripping member and the fence member are configured to grip and convey an object in an inverted position with the object located substantially below the links.

34. The link of claim 31, wherein the gripping member and the fence member are configured to grip a container neck.

35. The link of claim 31, wherein the gripping member includes an adapter sized to fit the object.

36. The link of claim 26, wherein the second position is self-adjustable depending on the size of the object.

37. The link of claim 26, wherein each gripping member pivots relative to the link body when moving from the first position to the second position.

38. The link of claim 37, wherein each gripping member pivots about an axis substantially parallel to the direction of transport when moving from the first position to the second position.

39. The link of claim 26, further including a spring member, and each gripping member is urged toward the second position by the spring member.

40. The link of claim 26, wherein the gripping member includes two gripping arms movable relative to the conveying surface.

41. The link of claim 26, wherein the gripping member has at least one gripping arm laterally offset from the gear drive mechanism in the direction of transport.

42. The link of claim 26, wherein the link is configured so that conveyed objects can be removed from the gripping members when the gripping members are in the second gripping position.

43. The link of claim 26, wherein the link includes two of the gripping members independently movable relative to the link.

44. The link of claim 43, wherein the link includes two of the sliders and two of the gear drive mechanisms, each gripping member being operatively associated with a respective one of the sliders and a respective one of the gear drive mechanisms.

45. The link of claim 44, wherein each gear drive mechanism includes a rack portion disposed on a respective one of the sliders and a gear portion disposed on a respective one of the gripping members.

46. A link for a conveyor suitable for conveying objects along a transport direction, the link comprising:

a link body having a length extending across the direction of transport and a width extending along the direction of transport;

a slider slidable along the length of the link body;

at least one gripping member movable relative to the slider and link body, the gripping member having at least one gripping arm; and

a rack and pinion gear drive mechanism interconnecting the slider and gripping member, the gripping arm being laterally offset from the gear drive mechanism in the direction of transport, a pinion portion being located on the gripping member and a rack portion being located on the slider, the slider selectively moving the gripping member between a first position and a second position via the gear drive mechanism, the gripping member when in first position being disposed in an open position, and the gripping member when in the second position being disposed in a gripping position for contacting one of the objects to hold the object during transport.

47. The link of claim 46, further including a spring member for urging the gripping member toward one of the first or second positions.

48. The link of claim 46, wherein each link includes a cam follower.

49. The link of claim 48, wherein the cam follower contacts a cam to thereby urge the gripping member toward one of the first or second positions.

50. The link of claim 46, further including a fence member, the gripping member gripping the object between the fence member and the gripping member when the gripping member is in the second position.

51. The link of claim 50, wherein the link body defines a conveying surface, and the gripping member and fence member are configured to grip the object so that the object is spaced from the conveying surface.

52. The link of claim 50, wherein the gripping member and the fence member are configured to grip and convey an object in an inverted position with the object located substantially below the links.

53. The link of claim 50, wherein the gripping member and the fence member are configured to grip a container neck.

54. The link of claim 46, wherein the gripping member includes an adapter sized to fit the object.

55. The link of claim 46, wherein the second position is self-adjustable depending on the size of the object.

56. The link of claim 46, wherein each gripping member pivots relative to the link body when moving from the first position to the second position.

57. The link of claim 56, wherein each gripping member pivots about an axis substantially parallel to the direction of transport when moving from the first position to the second position.

58. The link of claim 46, wherein the gripping member includes two gripping arms movable relative to the conveying surface.

59. The link of claim 58, wherein both of the gripping arms are laterally offset from the gear drive mechanism in the direction of transport.

60. The link of claim 46, wherein the link is configured so that conveyed objects can be removed from the gripping members when the gripping members are in the second gripping position.

61. The link of claim 46, wherein the link includes two of the gripping members independently movable relative to the link.

62. The link of claim 61, wherein the link includes two of the sliders and two of the gear drive mechanisms, each gripping member being operatively associated with a respective one of the sliders and a respective one of the gear drive mechanisms.